January 1992

Editor: R.M. Blackall
Editorial Board: R.J. Allam, R. Kershaw, W.H. Moores, P.R.S. Salter

Vol. 121
No. 1434

Contents

Page

Hoar-frost deposition on roads. T.D. Hewson and N.J. Gait 1

Analyses and forecasts of fluctuations in the angular momentum of the atmosphere and changes in the Earth's rotation.
R. Hide and J.O. Dickey 22

Satellite and radar images — 12 November 1991.
R.B.E. Lilley 26

ISSN 0026–1149

Printed in the United Kingdom for HMSO
Dd 291241 C13 1/92 12521

February 1992

Edited by R.M. Blackall Vol. 121
Editorial Board: R.J. Allam, R. Kershaw, W.H. Moores, P.R.S. Salter No. 1435

Contents

Page

Retirement of Sir John Houghton. ... 29

Numerical weather prediction. N. Morgan ... 30

Using satellite images. N. Morgan ... 31

The application of satellite infrared and passive microwave estimation techniques to Japan: Results from the First GPCP Algorithm Intercomparision Project. E.C. Barrett and T.J. Bellerby ... 34

Are gusts and lulls associated with directionality? A.J. Baran ... 46

The winter of 1990/91 in the United Kingdom G.P. Northcott ... 51

Noctilucent clouds over western Europe during 1990. D.M. Gavine ... 53

Reviews

Principles of air pollution meteorology. T.J. Lyons, W.D. Scott.
F.B. Smith ... 55

Impact models to assess regional acidification. J. Kämäri (editor).
F.B. Smith ... 55

A field test of thermometer screens. T. Andersson, I. Mattison.
W.S. Pike ... 56

Books received ... 56

ISSN 0026–1149

ISBN 0-11-728980-9

9 780117 289802

Printed in the United Kingdom for HMSO
Dd 291241 C13 2/92 12521

March 1992

Edited by R.M. Blackall
Editorial Board: R.J. Allam, R. Kershaw, W.H. Moores, P.R.S. Salter

Vol. 121
No. 1436

Contents

Page

Appointment of Chief Executive of the Meteorological Office. 57

Ocean Forecasting. Nina Morgan 58

An assessment of the surface fluxes from the Meteorological Office numerical weather prediction models. Part II. Heat and fresh water. J.O.S. Alves 59

Three motorway traffic accidents in hail showers on 29 March 1986: A radar study W.S. Pike 84

Books received 88

ISSN 0026–1149

ISBN 0-11-728981-7

9 780117 289819

Printed in the United Kingdom for HMSO
Dd291241 3/92 C13 503 12521

April 1992

Edited by R.M. Blackall
Editorial Board: R.J. Allam, R. Kershaw, W.H. Moores, P.R.S. Salter, J. Gloster

Vol. 121
No. 1437

Contents

Page

Some notes on radio sounding in the United Kingdom.
R.M. Blackall 89

The use of output from a numerical model to monitor the quality of radiosonde observations. C.D. Hall 91

Meteorological and hydrological aspects of the Battle of Copenhagen, 2 April 1801. J. Neumann 100

Objectively analysed cloud immersion frequencies for the United Kingdom. K.J. Weston 108

Reviews

Prediction and regulation of air pollution. M..E. Berlyand.
F.B. Smith 111

Fractals: endlessly repeated geometrical figures. H. Lauwerier.
B.R. Barwell 112

Books received 112

ISSN 0026–1149

Printed in the United Kingdom for HMSO
Dd291241 4/92 C22 503 12521

May 1992

Edited by R.M. Blackall
Editorial Board: R.J. Allam, R. Kershaw, W.H. Moores, P.R.S. Salter, J. Gloster

Vol. 121
No. 1438

Contents

Page

The role of ocean models in FOAM. S.J. Foreman 113

Numerical forecast of the onset of the 1990 seasonal long rains in Kenya. V.O. Ahago 123

The spring of 1991 in the United Kingdom. G.P. Northcott 130

Books received 132

ISSN 0026–1149

Printed in the United Kingdom for HMSO
Dd 291241 5/92 C13 503 12521

June 1992

Edited by R.M. Blackall Vol. 121
Editorial Board: R.J. Allam, R. Kershaw, W.H. Moores, P.R.S. Salter, J. Gloster No. 1439

Contents

Page

Dr F.B. Smith retires. 133

The first 50 years in the study of atmospheric dispersion. F.B. Smith 135

Low wind-speed meteorology. F.B. Smith 141

Incident above Zanjan. R.W. Lunnon 152

Reviews

Theoretical geophysical fluid dynamics. A.S. Monin. *R. Hide* 154

History of the Commission for Agricultural Meteorology of the World Meteorological Organization. W. Baier, I.G. Gringof and N.D. Strommen. *P. Harker* 154

Air traffic and the environment — Background, tendencies and potential global atmospheric effects. U. Schumann (editor). *D.S. McKenna* 156

Books received 156

ISSN 0026–1149

Printed in the United Kingdom for HMSO
Dd 291241, 6/92, C13, 543, 24503

July 1992

Vol. 121
No. 1440

Edited by R.M. Blackall
Editorial Board: R.J. Allam, R. Kershaw, W.H. Moores, J. Gloster
C. Nicholass, G. Lupton

Contents

Page

A description of a local climatological model used to predict temperature variations along stretches of road. J. Bogren, T. Gustavsson and S. Lindquist 157

Persistent hoar frost. W.S. Pike 165

Extreme rainfall at Hewenden Reservoir, 11 June 1956. V.K. Collinge, J. Thielen and J.F.R. McIlveen 166

Review

Atmospheric data analysis. R. Daley. *N.B. Ingleby* 172

ISSN 0026–1149

Printed in the United Kingdom for HMSO
Dd 291241 7/92 C13 543 24503

August 1992

Edited by R.M. Blackall
Editorial Board: R.J. Allam, R. Kershaw, W.H. Moores, J. Gloster
C. Nicholass, G. Lupton

Vol. 121
No. 1441

Contents

Page

Editorial 173

Indian summer monsoon rainfall indices: 1871–1990.
B. Parthasarathy, K. Rupa Kumar and D.R. Kothawale 174

Tropical cyclones in the south-west Indian Ocean — track prediction and verification 1989–91. J.H. Vermeulen and M.R. Jury 186

The summer of 1991 in the United Kingdom.
G.P. Northcott 192

Latest Climate Assessment 195

Review
Mid-latitude weather systems. T.N. Carlson. *D.A. Mansfield* 195

Books received 196

ISSN 0026–1149

Printed in the United Kingdom for HMSO
Dd 291241, 8/92, C13, 543, 24503

September 1992

Edited by R.M. Blackall
Editorial Board: R.J. Allam, R. Kershaw, W.H. Moores, J. Gloster
C. Nicholass, G. Lupton

Vol. 121
No. 1442

Contents

Page

Objective method for improving the operational performance of a road ice prediction model using interpolated mesoscale output and a templet for correcting systematic error. J.E. Thornes and J. Shao 197

United Kingdom synoptic meteorological observing — past, present and future. F. Singleton 205

Quality assurance in the observations area of the Meteorological Office. R.J. Shearman 212

Rime deposition. W.S. Pike 217

Reviews

Mountain weather and climate. R.G. Barry. *T.R. Spalding* 218

Natural weather wisdom. Uncle Offa (F. Hingston). *M.S.J. Harrison* 219

The engineering statistician's guide to continuous bivariate distributions. T.P. Hutchinson and C.D. Lai. *D.J. Thomson* 220

Printed in the United Kingdom for HMSO Dd 291241, 9/92, C13, 543, 24503

October 1992

Edited by R.M. Blackall
Editorial Board: R.J. Allam, R. Kershaw, W.H. Moores, J. Gloster
C. Nicholass, G. Lupton

Vol. 121
No. 1443

Contents

Page

International radar networking. C.G. Collier 221

A sea-breeze front seen by radar. T. Andersson and B. Lindgren 239

Correspondence

Hoar frost deposition. R. Mansell 241

Reviews

The *New Scientist* guide to chaos. N. Hall (editor). *B.R. Barwell* 242

Plants and microclimate: A quantitative approach to environmental plant physiology (second edition). H.G. Jones. *M.N. Hough* 243

Books received 243

Infrared image of a cloud-head — 27 April 1992 at 1800 UTC.

T.D. Hewson 244

ISSN 0026–1149

Printed in the United Kingdom for HMSO Dd 291241, 10/92, C13, 543, 24503.

November 1992

Edited by R.M. Blackall
Editorial Board: R.J. Allam, R. Kershaw, W.H. Moores, J. Gloster, C. Nicholass, G. Lupton

Vol. 121
No. 1444

Contents

Page

A short history of the Meteorological Research Flight (MRF) 1942–92.
W.T. Roach 245

The PAMPA flights. R.J. Ogden 257

A modern tool for teaching dynamic meteorology. M.J.M. Saraber, T.H. The and L.J.M. Kroon 260

The autumn of 1991 in the United Kingdom.
G.P. Northcott 264

Note from the Editor 266

Reviews

Asymptotic modelling of atmospheric flows. R. Zeytounian.
I. Roulstone 267

The year without a summer?: World climate in 1816. C.R. Harington (editor).
W.S. Pike 267

Correspondence

Hoar-frost deposition. N. Gait and T. Hewson 268

ISSN 0026—1149

ISBN 0-11-728989-2

9 780117 289895

Printed in the United Kingdom for HMSO Dd 291241, 1/93, C13, 543, 24503

December 1992

Edited by R.M. Blackall
Editorial Board: R.J. Allam, R. Kershaw, W.H. Moores, J. Gloster, C. Nicholass, G. Lupton

Vol. 121
No. 1445

Contents

Page

Synoptic and mesoscale analysis of intense mid-latitude cyclones.
G.A. Monk 269

Noctilucent clouds over western Europe during 1991.
D.M. Gavine 284

Conference Report.
Seminar on the United Kingdom contribution to the Global Climate Observing System (GCOS). N. Thompson 285

NOAA use European satellite data during hurricane Andrew.
M. Phillips 288

ISSN 0026—1149

Printed in the United Kingdom for HMSO Dd 291241, 1/93, C13, 543, 24503